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Amendment dated _____
Pending Appeal

Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-48 (previously canceled)

     49.(currently amended) A method of providing a custom orthodontic appliance for repositioning teeth of a patient comprising:

     communicating, from an orthodontic practitioner, three-dimensional information from the mouth of a patient of the shapes of the teeth of the patient;

     displaying, on a computer display for inspection by a person viewing the display, images of the teeth of the patient in suggested tooth positions and orientations that are based on the three-dimensional information;

     communicating, from [[a]] the person viewing the display, ~~feedback~~ information regarding the suggested tooth positions and orientations toward which the teeth of the patient are to be moved by orthodontic treatment;

     providing a custom ~~design of~~ orthodontic appliance that is configured to urge the teeth of the patient, when installed thereon, toward tooth positions and orientations and that has been manufactured based on the suggested tooth positions and orientations in accordance with the ~~feedback~~ information <u>communicated from the person viewing the display</u>.

     50.(currently amended) The method of claim 49 wherein:

     the person viewing the display is an orthodontic practitioner; and

     the ~~feedback~~ information <u>communicated from the person viewing the display</u> includes information selected from the group consisting essentially of information of changes to the suggested tooth positions <u>and</u> [[or]] orientations, and information approving tooth positions and orientations toward which the teeth of the patient are to be moved by the appliance.

51.(currently amended) The method of claim **50** further comprising:

providing the person viewing the display with a computer interface and displaying the

images thereon;

providing the computer interface with a capability for the entry by the person viewing the

display of the ~~feedback~~ information <u>communicated from the person viewing the</u>

<u>display</u>.

52.(currently amended) The method of claim **49** wherein:

the ~~feedback~~ information <u>communicated from the person viewing the display</u> includes

information of changes to the suggested tooth positions [[or]] <u>and</u> orientations;

the method further comprises redisplaying images of the teeth in tooth positions and

orientations revised in accordance with the ~~feedback~~ information <u>communicated from the person</u>

<u>viewing the display</u> for inspection by the person viewing the display.

53.(previously presented) The method of claim **49** wherein:

the three-dimensional information is derived at least in part from an impression of the

teeth of the patient from the orthodontic practitioner; and

the displaying of the images of the teeth of the patient is in response to data digitized from

a model of the teeth made from the impression.

54.(previously presented) The method of claim **49** further comprising:

communicating the three-dimensional information to a remote computing facility for the

derivation of the suggested tooth positions and orientations from the three-

dimensional information; and

displaying digital images of the teeth of the patient in the suggested tooth positions and

orientations on the computer display.

55.(previously presented) The method of claim **49** further comprising:

communicating the three-dimensional information to a remote computing facility for the

derivation of the suggested tooth positions and orientations from the three-

dimensional information; and

displaying digital images of the teeth of the patient in the suggested tooth positions and

orientations on the computer display;

communicating, to an orthodontic appliance manufacturing facility having equipment

thereat for manufacturing the custom orthodontic appliance, data that includes

three-dimensional information of the shapes of the teeth of the patient and

information regarding tooth positions and orientations toward which the teeth of

the patient are to be moved by orthodontic treatment; and

receiving from the orthodontic appliance manufacturing facility the custom orthodontic

appliance for providing the appliance to the orthodontic practitioner for the

treatment of the patient.

56.(previously presented) The method of claim **49** further comprising:

communicating, to a remote orthodontic appliance manufacturing facility having

equipment thereat for manufacturing the custom orthodontic appliance, data that

includes three-dimensional information of the shapes of the teeth of the patient

and information regarding tooth positions and orientations toward which the teeth

of the patient are to be moved by orthodontic treatment; and

receiving from the remote orthodontic appliance manufacturing facility the custom

orthodontic appliance for providing the appliance to the orthodontic practitioner

for the treatment of the patient.

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57.(currently amended) The method of claim 49 wherein:

the ~~feedback~~ information <u>communicated from the person viewing the display</u> includes information selected from the group consisting essentially of information of changes to the suggested tooth positions [[or]] <u>and</u> orientations, and information approving tooth positions and orientations toward which the teeth of the patient are to be moved by the appliance;

the method further comprises:

providing the person viewing the display with a capability for entering ~~feedback~~ information in the form of change data from an orthodontic practitioner into a computer indicating selected changes in the suggested tooth positions and orientations;

displaying on the computer images of the teeth in revised tooth positions and orientations in response to the ~~feedback~~ information <u>communicated from the person viewing the display</u>.

58.(previously presented) The method of claim 57 further comprising:

establishing a digital communications link between a computer terminal and a digital computer at a remote location;

transferring the three-dimensional information in digital form to the remote location;

deriving with the digital computer at the remote location the suggested tooth positions and orientations;

communicating digital data of the suggested tooth positions and orientations from the remote location to the computer display;

communicating change data from the computer display to the computer at the remote location;

calculating the revised tooth positions and orientations with the digital computer at the remote location in response to the change data;

communicating digital data of the revised tooth positions and orientations from the remote location to the computer display.

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59.(currently amended) The method of claim **58** further comprising:

entering commands accepting tooth positions and orientations at the computer display;

communicating entered commands accepting tooth positions and orientations to the

remote location; and

processing [[the]] data of the accepted revised tooth positions and orientations and of the

three-dimensional information and designing of the custom orthodontic appliance

with the digital computer at the remote location.

60.(previously presented) The method of claim **59** further comprising:

transmitting data of the designed custom orthodontic appliance from the remote location;

displaying images of the designed custom orthodontic appliance on the computer display

in response to the transmitted data;

transmitting appliance modification data to the computer at the remote location and

redesigning the appliance with the digital computer at the remote location in

response to the transmitted appliance modification data.

61.(previously presented) The method of claim **49** wherein:

the custom orthodontic appliance includes positioning jigs having surfaces thereon

that conform to the shapes of the teeth of the patient.

62.(currently amended) The method of claim **49** wherein:

the custom orthodontic appliance includes positioning jigs having surfaces thereon

that conform to the shapes of the teeth of the patient; and

the method further comprises:

locating the jigs jig on the patient with said surfaces surface conforming to

the shape of the one or more teeth,

positioning the appliance on the one or more teeth with the jigs jig, and

bonding the appliance so positioned to the tooth.

Claims **63-83** (canceled)

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84.(currently amended) The method of claim 52 wherein:

the ~~feedback~~ information communicated from the person viewing the display

includes information from an orthodontic practitioner approving the revised tooth positions and

orientations as those toward which the teeth of the patient are to be moved by the appliance.

Claims 85-110 (canceled)